



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**3232**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL 10W30 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0916528</b>	WC0878621	WC0878585
Sample Date		Client Info		<b>31 May 2024</b>	02 Mar 2024	02 Dec 2023
Machine Age	mls	Client Info		<b>21908</b>	383739	363622
Oil Age	mls	Client Info		<b>21908</b>	20119	21585
Filter Age	mls	Client Info		<b>21908</b>	20119	21585
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>19</b>	21	17
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	6	4
Lead	ppm	ASTM D5185m	>40	<b>5</b>	4	2
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

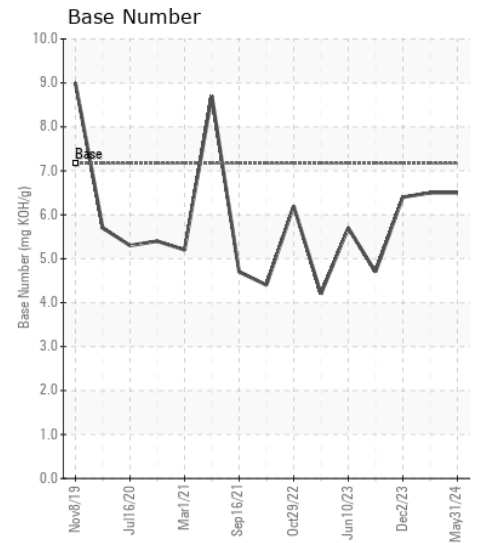
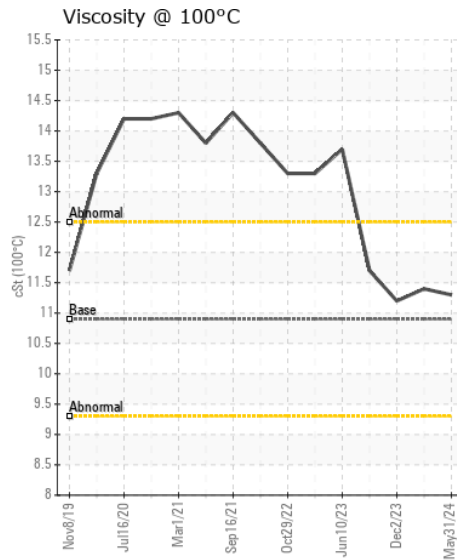
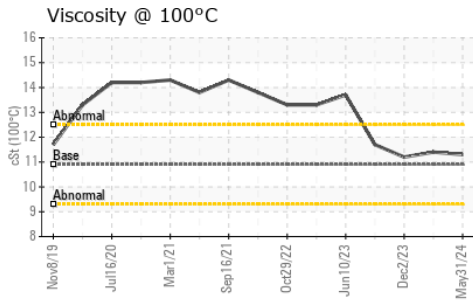
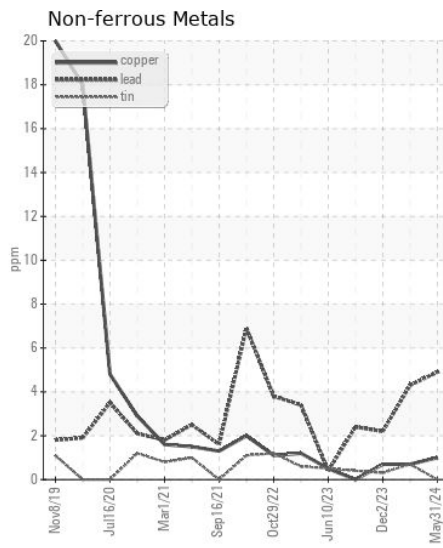
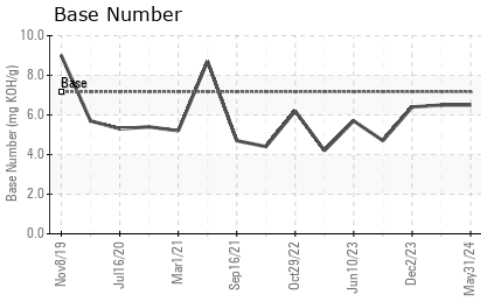
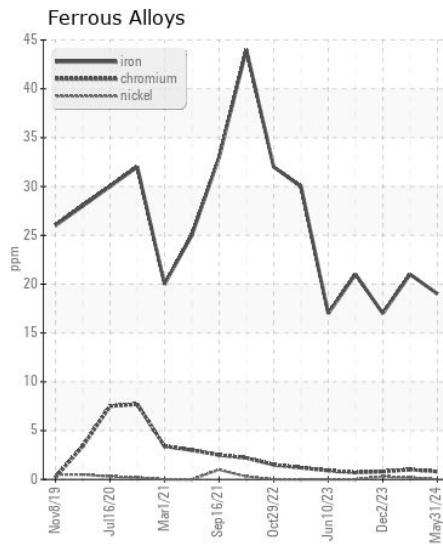
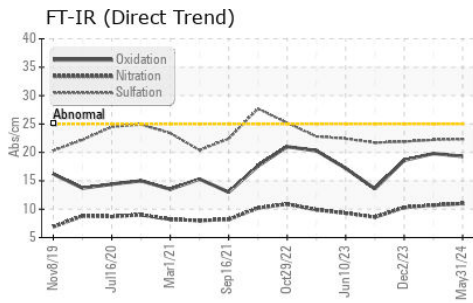
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	10	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.0</b>	10.7	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.3</b>	22.2	21.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	3	1
Boron	ppm	ASTM D5185m		<b>0</b>	4	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	3
Molybdenum	ppm	ASTM D5185m		<b>60</b>	65	54
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	470	<b>995</b>	1053	864
Calcium	ppm	ASTM D5185m	1150	<b>1154</b>	1181	1168
Phosphorus	ppm	ASTM D5185m	94	<b>1050</b>	1148	1011
Zinc	ppm	ASTM D5185m	1030	<b>1305</b>	1352	1218
Sulfur	ppm	ASTM D5185m		<b>3473</b>	3392	3241
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.3</b>	19.8	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	7.17	<b>6.5</b>	6.5	6.4
Visc @ 100°C	cSt	ASTM D445	10.90	<b>11.3</b>	11.4	11.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0916528

**Lab Number** : 06211095

**Unique Number** : 11083959

**Test Package** : FLEET

**Received** : 14 Jun 2024

**Tested** : 18 Jun 2024

**Diagnosed** : 18 Jun 2024 - Wes Davis

**CARCO TRANSPORTATION**

3403 EAST ROOSEVELT ROAD

LITTLE ROCK, AR

US 72206

Contact: DENNIS CATES

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F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)